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METIX MANGANESE MOMENTUM

According to Metix Director-Marketing Pat Davies, South Africa has nearly 70% of the manganese ore reserves in the world - the majority of which is located in the Northern Cape.
"Manganese ore is converted to ferromanganese using the electric smelting process, and then used in the production of mild steel. Ferromanganese production being a beneficiation process of adding value to the manganese ore itself," he explains.
With only two producers of ferromanganese in South Africa - BHP Billiton in Meyerton and Assmang (part of the African Minerals Corporation) in Cato Ridge, Kwazulu Natal - both companies are also large exporters of manganese ores.
"Whereas, in the case of stainless steel ferrochrome is a large input to each ton produced, in the case of mild steel, although considerably larger annual production than stainless steel, the consumption of ferromanganese per ton of mild steel is much lower," says Davies.
This means that, while the cost of electric power as well as the transport of ore to the smelter plant has a direct impact to locate the ferrochrome producing plants in South Africa, it does not have such a major influence on the location of a ferromanganese producing plant. In many cases these plants are part of the major steel producers in Japan and Germany (and now taking off in China), and thereby located close to the steel production plants. For this reason, most of the manganese ores mined in South Africa are exported to these producers

overseas.

Davies notes that in the last 20 years, some existing ferromanganese production facilities have been upgraded, "but the only new ferromanganese furnaces constructed in South Africa were an 81 MVA M12 furnace in Meyerton for Samancor (now BHP Billiton) in 1978; and a 24 MVA No 6 furnace at Cato Ridge for Assmang in 1991." Key Metix directors were involved in both of these projects, specifically Reinier Meyjes as Project Manager, Davies as Electrical Engineer and Gert Van Niekerk as Construction Manager on the Ml 2 Project, and then Davies as Project Manager on the No 6 Furnace Project at Cato Ridge.
At that time, M12 was the largest closed ferromanganese furnace ever constructed in the world, with electrode diameters of 1, 9 m. The key strategic element for Samancor with regard to this plant was a larger furnace with a lower cost of production of ferromanganese. In addition, and for operational reasons, the plant applied the first use of stainless steel electrode casings. Ml2, located on what was traditionally a Greenfield site, was completed in 18 months with the overall cost of the project coming in at R40-million (in 1978 monetary terms).

The Cato Ridge Project, on a Brownfield site, was completed in 12 months at an overall cost of R30-million (in 1991 monetary terms). "For both those projects, the key technology equipment - including process parameters - was from Tanabe, a company in Japan. Due to the fact that Japan was a leading producer of ferromanganese during the 1970s for its own steel plants, it was a principal provider of such process and equipment in the world," says Davies.
Since then, the Japanese input to the ferroalloy industry have diminished, and Metix stepped in to the gap, becoming a major supplier of plant processes and technology equipment to the industry.
More importantly, the Metix pressure rings technology equipment having taken a lead in the ferroalloy smelting industry in South Africa."Reinier Meyjes and another Metix director, Gert Van Niekerk, were directly involved at a later stage in a new project at the M12 Plant, which involved the construction of a plant to produce low and medium carbon ferromanganese, with the process and technology again coming from Japan."
Meyjes, Davies and Van Niekerk - together with three other directors with considerable experience in this industry - are the founders of Metix, a company that looks set to continue its growing success.

Metix director of marketing Pat Davies

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Page 1 /1